

IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
AUSTIN DIVISION

In re CASSAVA SCIENCES INC.	§	
SECURITIES LITIGATION	§	Master File No. 1:21-cv-00751-DAE
_____	§	
	§	CLASS ACTION
This Document Relates to:	§	
	§	
ALL ACTIONS	§	
_____	§	

**DEFENDANTS’ OPPOSITION TO PLAINTIFFS’  
MOTION FOR CLASS CERTIFICATION**

**TABLE OF CONTENTS**

	<b>Page</b>
INTRODUCTION .....	1
FACTUAL BACKGROUND.....	3
I.    Cassava’s Clinical Development of the Promising Alzheimer’s Treatment Simufilam.....	3
II.   Retail Meme-Stock Trading Caused Cassava’s Stock Price to Swing Wildly in 2021 .....	4
III.  The Citizen Petition’s Allegations Targeted Aspects of Simufilam’s Research.....	7
LEGAL STANDARD.....	7
ARGUMENT.....	8
I.    Plaintiffs Fail to Establish Predominance Under Rule 23(b)(3) .....	8
A.    Plaintiffs Fail to Establish that the <i>Basic</i> Presumption Should Apply.....	8
1.    Plaintiffs’ Expert Ignores Glaring Indicators of Inefficiency in the Market for Cassava Stock During Portions of the Class Period, Including Significant Price Volatility Tied to No News.....	11
2.    Plaintiffs’ Expert’s <i>Cammer</i> Factor 5 Event Study is Fatally Flawed.....	17
3.    Plaintiffs’ Expert’s Analysis of the <i>Cammer</i> and <i>Krogman</i> Factors Is Otherwise Fatally Flawed.....	18
4.    Plaintiffs’ Expert Also Fails to Demonstrate that the Markets for Cassava Options Were Efficient During the Class Period .....	19
B.    Even if the Relevant Market Was Efficient, the <i>Basic</i> Presumption Would Be Readily Rebutted Due to a Lack of Price Impact .....	21
1.    The Bulk of Plaintiffs’ Alleged “Corrective Disclosures” Are Not Associated With <i>Any</i> Statistically Significant Decline in Stock Price.....	22
2.    There Is a Glaring Mismatch Between the Misrepresentations and Corrective Disclosures Alleged by Plaintiffs.....	24
C.    Plaintiffs Are Not Entitled to a Presumption of Reliance Under <i>Affiliated Ute</i> .....	26
II.   Plaintiffs Fail to Provide a Classwide Damages Methodology Consistent with Their Theory of Liability .....	28
III.  Plaintiffs Fail to Establish Rule 23(a)’s Typicality Requirement.....	34
CONCLUSION.....	40

## TABLE OF AUTHORITIES

### Cases

<i>Abell v. Potomac Ins. Co.</i> , 858 F.2d 1104 (5th Cir. 1988), <i>cert. granted, judgment vacated on other</i> <i>grounds sub nom. Fryar v. Abell</i> , 492 U.S. 914 (1989).....	26, 27
<i>Affiliated Ute Citizens of Utah v. United States</i> , 406 U.S. 128 (1972).....	8, 26, 27, 28
<i>Akin v. Q-L Invs., Inc.</i> , 959 F.2d 521 (5th Cir. 1992) .....	27, 28
<i>Am. Exp. Co. v. Italian Colors Rest.</i> , 570 U.S. 228 (2013).....	7
<i>In re Apache Corp. Sec. Litig.</i> , 2024 WL 532315 (S.D. Tex. Feb. 9, 2024) .....	21, 24, 26
<i>Arkansas Tchr. Ret. Sys. v. Goldman Sachs Grp., Inc.</i> , 77 F.4th 74 (2d Cir. 2023) .....	26
<i>Basic Inc. v. Levinson</i> , 485 U.S. 224 (1988).....	2, 8, 9
<i>Bell v. Ascendant Sols., Inc.</i> , 422 F.3d 307 (5th Cir. 2005) .....	9
<i>In re BP p.l.c. Sec. Litig.</i> , 2013 WL 6388408 (S.D. Tex. Dec. 6, 2013).....	1, 29, 32, 34
<i>Cammer v. Bloom</i> , 711 F. Supp 1264 (D.N.J. 1989) .....	9
<i>Cannon v. BP Prod. N. Am., Inc.</i> , 2013 WL 5514284 (S.D. Tex. Sept. 30, 2013) .....	17
<i>Cavalier Carpets, Inc. v. Caylor</i> , 746 F.2d 749 (11th Cir. 1984) .....	27
<i>Comcast Corp. v. Behrend</i> , 569 U.S. 27 (2013).....	2, 28, 29, 32, 34
<i>Cruson v. Jackson Nat'l Life Ins. Co.</i> , 954 F.3d 240 (5th Cir. 2020) .....	28
<i>Ellis v. Costco Wholesale Corp.</i> , 657 F.3d 970 (9th Cir. 2011) .....	39
<i>Erica P. John Fund, Inc. v. Halliburton Co.</i> , 563 U.S. 804 (2011).....	8, 21

**TABLE OF AUTHORITIES cont'd**

<i>In re Fed. Home Loan Mortg. Corp. (Freddie Mac) Sec. Litig.</i> , 281 F.R.D. 174 (S.D.N.Y. Mar. 27, 2012).....	9, 10, 17
<i>Finkel v. Docutel/Olivetti Corp.</i> , 817 F.2d 356 (5th Cir. 1987) .....	9, 12
<i>Gary Plastic Packaging Corp. v. Merrill Lynch, Pierce, Fenner &amp; Smith, Inc.</i> , 903 F.2d 176 (2d Cir. 1990).....	39
<i>George v. China Auto. Sys., Inc.</i> , 2013 WL 3357170 (S.D.N.Y. July 3, 2013) .....	15, 17, 18
<i>Georgia Firefighters' Pension Fund v. Anadarko Petroleum Corp.</i> , 99 F.4th 770 (5th Cir. 2024) .....	17
<i>Goldman Sachs Grp., Inc. v. Arkansas Tchr. Ret. Sys.</i> , 594 U.S. 113 (2021).....	1, 2, 9, 21, 22, 24, 26
<i>Griffin v. GK Intelligent Sys., Inc.</i> , 196 F.R.D. 298 (S.D. Tex. 2000).....	34
<i>Halliburton Co. v. Erica P. John Fund, Inc.</i> , 573 U.S. 258 (2014).....	1, 2, 21
<i>In re HealthSouth Corp. Sec. Litig.</i> , 213 F.R.D. 447 (N.D. Ala. 2003).....	34, 35
<i>IBEW v. Deutsche Bank AG</i> , 2013 WL 5815472 (S.D.N.Y. Oct. 29, 2013).....	10, 16, 39
<i>In re Interbank Funding Corp.</i> , 629 F.3d 213 (D.C. Cir. 2010) .....	27
<i>In re Jan. 2021 Short Squeeze Trading Litig.</i> , 2023 WL 9035671 (S.D. Fla. Nov. 13, 2023).....	2
<i>Johnston v. HBO Film Mgmt.</i> , 265 F.3d 178 (3d Cir. 2001).....	27
<i>Joseph v. Wiles</i> , 223 F.3d 1155 (10th Cir. 2000) .....	27
<i>Krogman v. Sterritt</i> , 202 F.R.D. 467 (N.D. Tex. 2001) .....	2, 9, 12, 15, 18
<i>Levitt v. J.P. Morgan Sec., Inc.</i> , 710 F.3d 454 (2d Cir. 2013).....	7, 8
<i>Madison v. Chalmette Ref., L.L.C.</i> , 637 F.3d 551 (5th Cir. 2011) .....	7, 8

**TABLE OF AUTHORITIES cont'd**

<i>In re Northfield Lab'ys, Inc. Sec. Litig.</i> , 267 F.R.D. 536 (N.D. Ill. 2010).....	16
<i>O'Neil v. Appel</i> , 165 F.R.D. 479 (W.D. Mich. 1996).....	15, 18
<i>Ohio Pub. Emps. Ret. Sys. v. Fed. Home Loan Mortg. Corp.</i> , 2018 WL 3861840 (N.D. Ohio Aug. 14, 2018).....	29
<i>In re PolyMedica Corp. Sec. Litig.</i> , 453 F. Supp. 2d 260 (D. Mass. 2006).....	19
<i>Prantil v. Arkema Inc.</i> , 986 F.3d 570 (5th Cir. 2021) .....	8
<i>Rocco v. Nam Tai Elecs., Inc.</i> , 245 F.R.D. 131 (S.D.N.Y. 2007) .....	35
<i>ScriptsAmerica, Inc. v. Ironridge Glob. LLC</i> , 119 F. Supp. 3d 1213 (C.D. Cal. 2015) .....	15, 18
<i>Serfaty v. Int'l Automated Sys., Inc.</i> , 180 F.R.D. 418 (D. Utah 1998) .....	15, 18
<i>Shannon v. Allstate Ins. Co.</i> , 2024 WL 1080915 (W.D. Tex. Jan. 31, 2024) .....	40
<i>Shupe v. Rocket Companies, Inc.</i> , 2024 WL 416377 (E.D. Mich. Feb. 5, 2024).....	2
<i>Sicav v. James Jun Wang</i> , 2015 WL 268855 (S.D.N.Y. Jan. 21, 2015) .....	29
<i>Smith v. Ayres</i> , 845 F.2d 1360 (5th Cir. 1988) .....	26
<i>Turnbow v. Life Partners, Inc.</i> , 2013 WL 3479884 (N.D. Tex. July 9, 2013).....	34
<i>Unger v. Amedisys Inc.</i> , 401 F.3d 316 (5th Cir. 2005) .....	8, 9, 10, 15
<i>In re Vale S.A. Sec. Litig.</i> , 2022 WL 122593 (E.D.N.Y. Jan. 11, 2022) .....	29, 30
<i>Vervaecke v. Chiles, Heider &amp; Co.</i> , 578 F.2d 713 (8th Cir. 1978) .....	27
<i>In re Volkswagen "Clean Diesel" Mktg., Sales Pracs., &amp; Prod. Liab. Litig.</i> , 2 F.4th 1199 (9th Cir. 2021) .....	27

**TABLE OF AUTHORITIES *cont'd***

*Waggoner v. Barclays PLC*,  
875 F.3d 79 (2d Cir. 2017).....26, 27

*Wal-Mart Stores, Inc. v. Dukes*,  
564 U.S. 338 (2011).....7, 8

**Rules**

Fed. R. Civ. P. 23.....7, 8, 29, 34

## INTRODUCTION

This case is anything but a “routine” securities class action. Motion for Class Certification (ECF 148) (“Motion”) at 1. During the class period, Cassava’s stock was considered a “meme stock”—a stock subject to extraordinary volatility due to viral social media attention by retail investors, divorced from the value of the underlying company. “Meme stocks” are a relatively new phenomenon, thrust into the public eye beginning in 2021 with the meteoric rise of stocks like GameStop, AMC Entertainment, Blackberry, and others. Meme stocks sent “shockwaves through Wall Street” because such retail trading “def[ie]d conventional market wisdom.”<sup>1</sup> Because of “the potential for such activities to distort market dynamics and undermine fair and efficient price discovery mechanisms,”<sup>2</sup> academics and market participants have found evidence that the markets for meme stocks are inefficient. Ex. 1, Expert Report of Rene Stulz, Ph.D. (“Stulz Rpt.”) ¶ 58.<sup>3</sup>

The disconnect between meme stocks and typical market efficiency poses an insurmountable obstacle to class certification here. The irrationality of meme stock pricing is a gamechanger for the issue of reliance that has long been the focus of certification disputes in securities cases. *See Goldman Sachs Grp., Inc. v. Arkansas Tchr. Ret. Sys.*, 594 U.S. 113, 118 (2021); *Halliburton Co. v. Erica P. John Fund, Inc.*, 573 U.S. 258, 278 (2014) (*Halliburton II*);

---

<sup>1</sup> Ex. 6, “Meme Stocks Frenzy Reignites Debate Over Market Integrity,” *Forbes* (May 15, 2024). Unless otherwise noted, all “Ex.” references are to the Affidavit of Scott Campbell in Support of Defendants’ Opposition to Plaintiffs’ Opposed Motion for Class Certification.

<sup>2</sup> *Id.*

<sup>3</sup> Dr. Stulz is the Everett D. Reese Chair of Banking and Monetary Economics at the Ohio State University, Director of the Dice Center for Research in Financial Economics, Research Associate of the National Bureau of Economic Research, former editor of the *Journal of Finance* and the *Journal of Financial Economics*, and former President of the American Finance Association. Dr. Stulz holds a Ph.D. in Economics from the Massachusetts Institute of Technology and is a recognized finance scholar, having authored more than 100 journal articles and several textbooks. Courts have relied on Dr. Stulz’s expert opinions in a number of class certification proceedings, including within the Fifth Circuit. *E.g., In re BP p.l.c. Sec. Litig.*, 2013 WL 6388408, at \*4 (S.D. Tex. Dec. 6, 2013).

*Basic Inc. v. Levinson*, 485 U.S. 224, 242-46 (1988).<sup>4</sup> Although reliance can be presumed on a classwide basis when a stock is trading in an efficient market, *see Goldman*, 594 U.S. at 118-20, when a stock’s price is not correlated with the release of value-relevant information, the impact of certain disclosures or omissions cannot be presumed, *see Halliburton II*, 573 U.S. at 283.

Reliance cannot be presumed here. Cassava’s stock price was just as likely to change significantly *solely* due to increased social media discussion, unrelated to any value-relevant news, as it was in response to any actual new information. *Cf. Krogman v. Sterritt*, 202 F.R.D. 467, 477 (N.D. Tex. 2001) (explaining that “in an efficient market, a stock’s price remains relatively stable in the absence of news”); *see also* Stulz Rpt. ¶¶ 51-94. Indeed, for a majority of the supposed “corrective disclosures,” there was *no* statistically significant impact on the stock’s price.

A cursory analysis of the market for the stock, lacking in rigor and care, is not sufficient to establish efficiency in such circumstances. Yet Plaintiffs ignore the meme-stock dynamics of this case, asserting the case is “no different” from other securities cases and providing cursory arguments supported only by a basic, rinse-and-repeat expert report that is unreliable in this context. *See* Motion at 1-2, 12-20; Expert Report of Steven Feinstein (ECF 148-7) (“Feinstein Rpt.”).

Because the critical issue of reliance cannot be proven on a classwide basis, the Court should not certify Plaintiffs’ proposed class. But that is not the only fatal flaw in Plaintiffs’ Motion. By ignoring evidence of inefficiency and the inherent complications associated with pricing a meme stock, Plaintiffs have failed to show how damages can possibly be calculated on a classwide basis. *See Comcast Corp. v. Behrend*, 569 U.S. 27, 34-35 (2013). And even if Plaintiffs somehow

---

<sup>4</sup> Since 2021, multiple courts have wrestled with the interaction between meme stocks and reliance in class certification disputes. *E.g.*, *Shupe v. Rocket Companies, Inc.*, 2024 WL 416377 (E.D. Mich. Feb. 5, 2024) (motion for class certification pending); *In re Jan. 2021 Short Squeeze Trading Litig.*, 2023 WL 9035671 (S.D. Fla. Nov. 13, 2023) (motion for class certification denied).



could show an efficient market for Cassava stock, their claims would not be typical of the class. Plaintiffs were retail traders swept up in the meme stock phenomenon, making reckless bets disconnected from any disclosures about the company.

### **FACTUAL BACKGROUND**

While Cassava somehow achieved “meme stock” status during the class period, Cassava is a very real company with a dedicated team focused on a singularly important mission: the detection and treatment of Alzheimer’s disease.

#### **I. Cassava’s Clinical Development of the Promising Alzheimer’s Treatment Simufilam**

Alzheimer’s disease is a brain condition causing cognitive decline in millions of people across the globe, including more than 5 million people in the United State alone. Cassava is committed to developing successful drug candidates that treat and slow the progression of Alzheimer’s disease. Its executive team includes seasoned experts in drug development and approval, including professionals with experience at Johnson & Johnson, Pfizer, Sanofi, Ciba-Geigy, and various clinical-stage biopharmaceutical companies. Together, Cassava’s team has guided the company’s leading drug candidate, simufilam, through development and into clinical trials. The FDA accepted Cassava’s Investigational New Drug submission for simufilam in 2017, and Cassava conducted Phase 1 trials on 24 healthy volunteers, showing no treatment-related adverse effects. Cassava then undertook multiple Phase 2 clinical trials, treating small groups of Alzheimer’s patients with 50 mg or 100 mg doses of simufilam over a 28-day period. *See* Ex. 29, 2023 Form 10-K, at 9-10.

Cassava has since undertaken larger studies of simufilam. Cassava enrolled 200 mild-to-moderate Alzheimer’s disease patients in a 24-month Phase 2 safety study, including a 12-month open-label treatment phase; a 6-month randomized, placebo-controlled withdrawal phase; and 6 additional months of open-label treatment. Between January 2023 and February 2024, Cassava

announced results for each phase, showing that the treatment appeared safe and well-tolerated, and that cognitive testing results appeared favorable. *Id.* at 10-15.

With agreement from the FDA that the completed Phase 2 program, together with an ongoing and well-defined Phase 3 clinical program, were sufficient to potentially show evidence of clinical efficacy for simufilam in Alzheimer’s disease, Cassava is now in the process of undertaking 52-week and 76-week Phase 3 clinical trials. The Phase 3 trials are currently ongoing and fully enrolled with a total of 1,900 mild-to-moderate Alzheimer’s disease patients at various clinical sites. Top-line data for the 52-week study are expected at approximately year-end 2024, with data for the 76-week study expected mid-year 2025. *Id.* at 15-19.

## **II. Retail Meme-Stock Trading Caused Cassava’s Stock Price to Swing Wildly in 2021**

In 2021, Cassava was swept up in the “meme stock phenomenon.” Meme stocks are characterized by “high levels of enthusiasm from investors on social media and online platforms such as Reddit and Twitter, which could lead to dramatic swings in prices and increases in trading volume.” Stulz Rpt. ¶ 57.

Cassava was a leading meme stock during the class period. Indeed, the *only* two stocks in the Russell 2000 that saw higher gains than Cassava in the first half of 2021 were GameStop and AMC Entertainment—the two paradigmatic examples of meme stocks.<sup>5</sup> Market participants, business publications, and professional analysts described Cassava as a meme stock. In 2021 alone,

---

<sup>5</sup> Ex. 7, “Drugmaker With No Product Gains 911% on Alzheimer’s, Meme Hopes,” *Bloomberg*, June 8, 2021 (“The company is the third biggest gainer this year behind GameStop Corp. and AMC Entertainment Holdings Inc. in the Russell 2000.”).

*Bloomberg*,<sup>6</sup> the *Financial Times*,<sup>7</sup> *Business Insider*,<sup>8</sup> and *MarketWatch*<sup>9</sup> all attributed large movements in Cassava's price to "meme traders." Cassava also was included in the Solactive Roundhill Meme Stock Index, which tracks meme stocks. Stulz Rpt. ¶ 66.

Cassava's stock was the subject of zealous enthusiasm on social media platforms. Cassava's mentions on Reddit and Twitter averaged over 200 mentions per day in 2021, and included peaks of over 1,500 mentions per day. *See* Stulz Rpt. Exs. 1A & 1B. In fact, on August 25, 2021, *Business Insider* recognized Cassava as one of the top-mentioned stocks in a 10-million-member online forum known to drive the meme-stock phenomenon, WallStreetBets.<sup>10</sup>

During this period, Cassava's stock price frequently underwent massive swings in the absence of any new, value-relevant information about the company.

Specifically, on December 31, 2020—nearly two months after Defendants had released the final Phase 2b clinical trial results, more than a year since the Phase 2a results were public, and after Defendants had supposedly been misrepresenting the merits of Cassava's pre-clinical research for over a decade—Cassava's stock price closed at \$6.82 per share. But during January 2021, Cassava's stock price nearly quadrupled, closing near \$23 per share on February 1, 2021, despite no new value-relevant news being released.

The next day, Cassava released interim 6-month cognition results from its Phase 2 open-label drug safety study. *See* Ex. 30 (February 2, 2021 Press Release). Cassava reported that patients

---

<sup>6</sup> *Id.*; Ex. 8, "Biotech Finds Market Love at Last as Meme Traders, FDA Converge," *Bloomberg* (June 11, 2021).

<sup>7</sup> Ex. 9, "Global Stocks Rise for Best Week Since November," *Financial Times*, Feb. 5, 2021.

<sup>8</sup> Ex. 10, "Short Sellers Betting Against Meme Stock Cassava Have Made \$100 Million Over the Past Month," *Business Insider* (Aug. 31, 2021).

<sup>9</sup> Ex. 11, "Short Sellers Hit Back at Cassava Lawsuit," *MarketWatch* (Nov. 11, 2022).

<sup>10</sup> *E.g.*, Ex. 12, "Meme Stocks Are Riding a Wave of Reddit Enthusiasm Again, as Traders Cheer Fresh Gains in GameStop, AMC, and BlackBerry," *Business Insider* (Aug. 25, 2021); *see also* Ex. 13, "WallStreetBets Reddit Group: What Is It?" *CoinDesk* (Jan. 28, 2021).

“improved cognition scores by 1.6 points on ADAS-Cog11, a 10% mean improvement from baseline to month 6.” *Id.*<sup>11</sup> Notwithstanding the lack of a placebo control in this open-label study, the relatively small sample size (the first 50 patients to complete 6 months on the drug), and the relatively short, 6-month timeframe, “SAVA” (Cassava’s stock ticker) began being mentioned on Reddit and Twitter more than *1,600 times per day*. See Stulz Rep. Exs. 1A & 1B.

Between February 3 and 5, 2021, Cassava’s share price fluctuated from \$60 all the way to \$117 before falling all the way back down to \$45. No new information was published on those days. That volatility was instead associated with increased social media activity surrounding Cassava’s stock. See Stulz Rpt. ¶ 82.

Cassava’s price continued to fluctuate between February 5 and July 28, 2021, nearly tripling in value to close at \$135 per share on July 28. Such swings occurred despite no new, value-relevant information being released on days with statistically significant price increases. Feinstein Rpt. Exs. 14 & 15. Instead of “news,” this enormous increase was attributed to retail trading. See Stulz Rpt. ¶¶ 83-84 (describing massive price increases on June 11 and July 21, 2021 associated with increased social media activity in the absence of any new information). As a Cantor Fitzgerald securities analyst covering Cassava noted in July 2021, this increase was a result of short-term retail traders, who collectively now owned 60% of Cassava’s stock. See Ex. 14 (Cantor Fitzgerald, July 14, 2021).

The day after that \$135 closing price, the company released new information—and it was good. Cassava reported additional ADAS-Cog results from its Phase 2 open-label study, showing that 50 patients who had now been taking simufilam for 9 months showed significant cognitive improvement. Market analysts were encouraged by this data, which they described as “positive,”

---

<sup>11</sup> Plaintiffs have not alleged any misrepresentations regarding this study.

Ex. 15 (JonesTrading, July 29, 2021), and “better than expected,” Ex. 16 (H.C. Wainwright, July 30, 2021).

Yet despite these positive results, Cassava’s share price *plummeted*, closing at \$103 on July 29, 2021, down 29% from the intraday high of \$146, and closing at \$69 on July 30, 2021, a drop of more than 50% from the intraday high the day before.

### **III. The Citizen Petition’s Allegations Targeted Aspects of Simufilam’s Research**

It was in this period of extreme volatility that two Cassava short sellers, Drs. David Bredt and Geoffrey Pitt, filed a Citizen Petition with the FDA. Although they failed to disclose it when they filed the Citizen Petition on August 18, 2021, both Drs. Bredt and Pitt held short positions in Cassava, meaning they were set to benefit financially if Cassava’s stock fell.

The Citizen Petition requested that the FDA “halt” any future trials of simufilam over allegations data manipulation. *See* ECF 81 at 48-92 (“Citizen Petition”). The price of Cassava stock fluctuated wildly between August 25 and August 30, 2021, ultimately dropping from \$117 per share to \$53 per share. The FDA denied the Citizen Petition in February 2022.

### **LEGAL STANDARD**

Rule 23 “imposes stringent requirements for certification that in practice exclude most claims.” *Am. Exp. Co. v. Italian Colors Rest.*, 570 U.S. 228, 234 (2013). Plaintiffs seek certification under Rule 23(b)(3), meaning they bear the burden of showing not just that the Rule 23(a) requirements are met, but also that common issues predominate and that a class action is the superior method of adjudicating this case. Fed. R. Civ. P. 23(b)(3).

Plaintiffs must go beyond the “mere pleading” and “affirmatively demonstrate” and “prove” compliance with each of the requirements. *Wal-Mart Stores, Inc. v. Dukes*, 564 U.S. 338, 350 (2011). The Rule 23 requirements must be established by at least a preponderance of the evidence, *Madison v. Chalmette Ref., L.L.C.*, 637 F.3d 551, 554 (5th Cir. 2011); *Levitt v. J.P.*

*Morgan Sec., Inc.*, 710 F.3d 454, 464-65 (2d Cir. 2013), and Plaintiffs’ proffered evidence must be subjected to “rigorous analysis” because “actual, not presumed, conformance” with Rule 23 is “indispensable” to any class certification, *Dukes*, 564 U.S. at 350-51. *See Unger v. Amedisys Inc.*, 401 F.3d 316, 322-23 (5th Cir. 2005) (“Courts have likened the degree of proof required to the standards used in preliminary injunction hearings...or in...12(b)(1) and 12 (b)(2) jurisdiction contexts.”); *see also Madison*, 637 F.3d at 554. Reliable evidence is especially important when expert testimony is relevant to the decision to certify. *Prantil v. Arkema Inc.*, 986 F.3d 570, 575 (5th Cir. 2021). If expert testimony does not satisfy the *Daubert* standard for reliability, it “cannot ‘prove’ that the Rule 23(a) prerequisites have been met.” *Id.* Plaintiffs fall far short of this rigorous standard, and the Motion should be denied.

## **ARGUMENT**

### **I. Plaintiffs Fail to Establish Predominance Under Rule 23(b)(3)**

In securities cases, “[w]hether common questions of law or fact predominate...often turns on the element of reliance.” *Erica P. John Fund, Inc. v. Halliburton Co.*, 563 U.S. 804, 810 (2011) (*Halliburton I*). Reliance is inherently an individualized question. *Id.* at 810-11. To overcome this obstacle, Plaintiffs attempt to invoke the rebuttable presumptions of reliance articulated in *Basic Inc. v. Levinson*, 485 U.S. 224 (1988) and *Affiliated Ute Citizens of Utah v. United States*, 406 U.S. 128 (1972). Because Plaintiffs fail to establish that either presumption should apply, however, they fail to show predominance under Rule 23(b)(3).

#### **A. Plaintiffs Fail to Establish that the *Basic* Presumption Should Apply**

The *Basic* presumption is based on the theory that the “market price” of shares traded in an “efficient” market “reflects all publicly available information, and, hence, any material misrepresentations.” 485 U.S. at 246. Because an “efficient” market “transmits information to the investor in the processed form of a market price,” *id.* at 244, *Basic* holds that an investor may be

presumed to rely on public misstatements whenever he “buys or sells stock at the price set” by that market, *id.* at 247.

Thus, to invoke the *Basic* presumption, Plaintiffs must prove that the market for Cassava’s stock was “efficient” during the relevant period. *Goldman Sachs Grp., Inc. v. Arkansas Tchr. Ret. Sys.*, 594 U.S. 113, 118 (2021); *see Unger*, 401 F.3d at 322 (“Absent an efficient market, individual reliance by each plaintiff must be proven, and the proposed class will fail the predominance requirement.”).

For a security’s market to be “efficient,” prices must fully reflect all material public information and respond quickly and fully to new information. *Bell v. Ascendant Sols., Inc.*, 422 F.3d 307, 313-14 (5th Cir. 2005) (explaining that “the hallmark of an efficient capital market” is the extent to which “the current price reflects all available information” (citation omitted)); *Unger*, 401 F.3d at 324 (“In an efficient market, ...material misstatements alter a stock’s price almost immediately.”); *In re Fed. Home Loan Mortg. Corp. (Freddie Mac) Sec. Litig.*, 281 F.R.D. 174, 182 (S.D.N.Y. Mar. 27, 2012) (“Without evidence of the prompt effect of unexpected news on market price, the market cannot be called efficient.”). And when there is no new material information, prices in an efficient market should remain stable. *See Krogman v. Sterritt*, 202 F.R.D. 467, 477 (N.D. Tex. 2001) (“[I]n an efficient market, a stock’s price remains relatively stable in the absence of news.”); *see also Finkel v. Docutel/Olivetti Corp.*, 817 F.2d 356, 360 (5th Cir. 1987).

In evaluating efficiency, courts often consider the factors described in *Cammer v. Bloom*, 711 F. Supp 1264 (D.N.J. 1989) and *Krogman*, 202 F.R.D. 467 (the “*Cammer/Krogman* factors”), which can support application of the *Basic* presumption in some circumstances. *See Unger*, 401 F.3d at 325 (describing the factors).

Because Plaintiffs must demonstrate efficiency, “[t]o defeat the presumption of reliance, defendants do not...have to show an inefficient market. Instead, they must demonstrate that plaintiffs’ proffered proof of market efficiency falls short of the mark.” *IBEW v. Deutsche Bank AG*, 2013 WL 5815472, at \*20 (S.D.N.Y. Oct. 29, 2013); *see Unger*, 401 F.3d at 321-22. And Plaintiffs’ supposed evidence of efficiency falls far short of the mark here.

*First*, Plaintiffs cannot establish the requisite “cause-and-effect relationship between unexpected news and [Cassava’s] market price” during the class period. *Freddie Mac*, 281 F.R.D. at 182 (denying class certification on that ground). Plaintiffs and their expert, Dr. Feinstein, attempt to establish this relationship through a cursory analysis that fails to address (or even mention) how Cassava stock was affected by the “meme stock” phenomenon, which caused significant volatility in the absence of value-relevant news about the Company.

*Second*, Dr. Feinstein fails to address evidence that contradicts his conclusion. Specifically, Dr. Feinstein fails to assess the short-sale constraints on the number of Cassava shares available for borrowing by a short-seller, or the extreme costs of short-selling Cassava’s stock. Similarly, Dr. Feinstein has not conducted *any* analysis to separately establish efficiency during the later portion of the proposed class period, when few analysts continued to cover the stock, and after analysts stated it was too difficult to “effectively diligence” information about the company.

*Third*, Dr. Feinstein’s analysis of the markets for Cassava options is flawed and unreliable. Dr. Feinstein attempts to establish the efficiency of the Cassava options markets based on the purported efficiency of the Cassava stock market. But this conclusion is unreliable because it (1) is based on his unreliable assessment of efficiency for Cassava stock discussed above, and (2) ignores the *actual* characteristics of the markets for Cassava options, which were characterized by illiquidity and high transaction costs during the class period.



**1. Plaintiffs’ Expert Ignores Glaring Indicators of Inefficiency in the Market for Cassava Stock During Portions of the Class Period, Including Significant Price Volatility Tied to No News**

Plaintiffs fail to grapple with the many ways that Cassava stock departed from the workings of an efficient market. The stock was volatile when it should have been stable. It was stable when it should have moved. It plummeted when it should have risen in response to favorable news. Because Plaintiffs’ expert ignores this evidence and neglects to consider its cause—the “meme stock” phenomenon—his opinion is unreliable and cannot support certification. Stulz Rpt. ¶¶ 41-94.

Rather than rapidly incorporating new information, Cassava’s stock price fluctuated wildly based on the activity of retail traders during the meme stock phenomenon that characterized much of the proposed class period. *See id.* ¶¶ 51-94. As noted above, market observers repeatedly described Cassava as a “meme stock” during this time, and attributed large movements in Cassava’s stock price to “meme traders.” *E.g.*, Exs. 8-12. Cassava was even included in the Solactive Roundhill Meme Stock Index, a financial index that tracked the returns of stocks classified as meme stocks, at various points during the class period. Stulz Rpt. ¶ 66.

As described in Dr. Stulz’s expert report, Cassava’s stock displayed all the hallmarks of an inefficient “meme stock” during the class period:<sup>12</sup>

- *High Ownership by Short-Term, Retail Traders:* Throughout the class period, the bulk of Cassava’s stock was held by individual retail traders, with the share of institutional ownership being unusually low. Stulz Rpt. ¶¶ 61, 105. Indeed, by one estimate, 60% of Cassava’s stock was held by short-term, retail traders during the class period. *See id.* ¶ 61.

---

<sup>12</sup> *See also* Ex. 17, *Staff Report on Equity and Options Market Structure Conditions in Early 2021*, U.S. Securities and Exchange Commission (Oct. 14, 2021) (describing the characteristics of meme stocks, including “frequent mentions on social media, including Reddit,” “large price moves or increased trading volume that significantly exceeded broader market movements,” and an “amount of ‘short interest,’ measured as the number of shares sold short as a portion of the total shares outstanding” that exceeds the market average).

- *High Short Interest:* Cassava’s stock experienced consistently high levels of short interest during the class period. *See id.* Ex. 7. Indeed, Cassava’s short interest was above the 99<sup>th</sup> percentile of U.S. stocks during the class period. *See id.* ¶ 98. This is particularly unusual given Cassava’s low level of institutional ownership. *See id.* ¶ 105 (noting that Cassava’s institutional ownership ranked below the 25<sup>th</sup> percentile of U.S. stocks during the class period).
- *Frequent Mentions on Social Media:* Cassava was one of the top-mentioned stocks on Reddit, Twitter, and other social media forums at times during the class period.<sup>13</sup> Cassava’s daily mentions on Reddit skyrocketed from fewer than two per day in 2020 to more than 50 per day in 2021. *See* Stulz Rpt. Ex. 1. Similarly, Cassava’s Twitter mentions quadrupled from fewer than 40 per day in 2020 to more than 160 per day in 2021. Stulz Rpt. Ex. 2. In the aggregate, Cassava was mentioned more than 19,000 times in 2021 and more than 33,000 times during the class period on Reddit, and more than 59,000 times in 2021 and more than 148,000 times during the proposed class period on Twitter. Stulz Rpt. ¶ 62. Moreover, heightened activity on social media frequently was associated with extreme volatility in Cassava’s stock. *See id.* ¶¶ 79-94.
- *Price Swings and Volatility Disconnected from Any New Information:* Most significantly, and as discussed below, Cassava’s stock price underwent massive changes in the absence of new, value-relevant information.

Cassava’s stock price frequently swung in the absence of any news. For example, there was virtually no value-relevant news about Cassava released between February 2 and July 28, 2021. *See* Feinstein Rpt. Exs. 14 & 15. Price changes in an efficient market should have been modest, at most, during that period. *See Krogman*, 202 F.R.D. at 477; *Finkel v. Docutel/Olivetti Corp.*, 817 F.2d at 360; *see also* Stulz Rpt. ¶ 34.

But the changes in Cassava’s stock price during this “no-news” period were anything but modest. Between February 3 and February 5, 2021, Cassava’s stock price fluctuated to as high as \$117 per share intraday before ultimately closing at under \$45 per share.

---

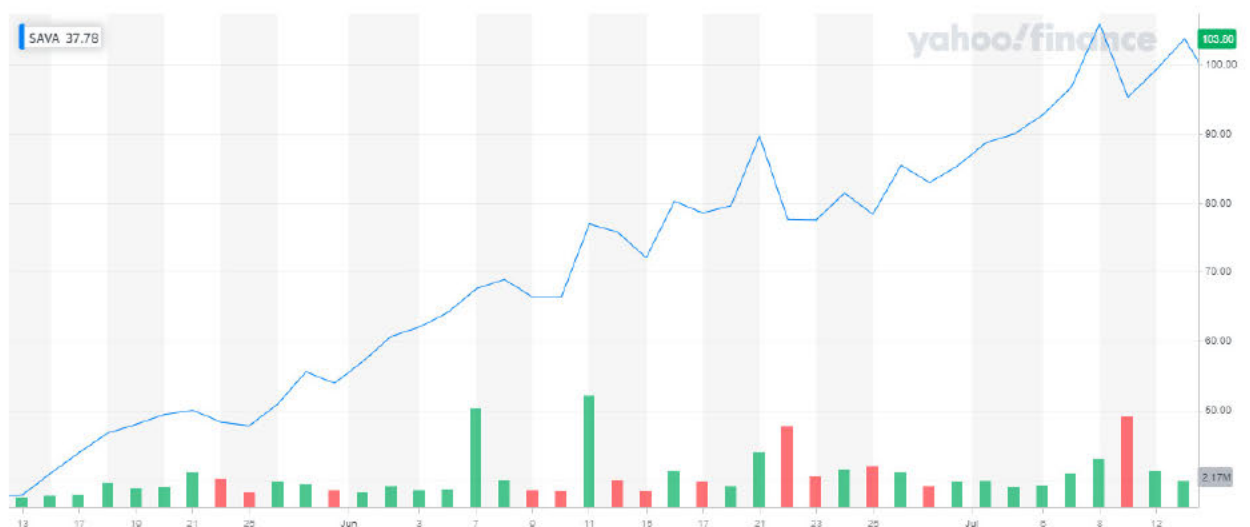
<sup>13</sup> *See, e.g.*, Ex. 12 (describing Cassava as one of “the most hyped stocks” on Reddit).

Date	Open	High	Low	Close	Volume
<b>Feb 3, 2021</b>	\$62.74	\$90.00	\$59.50	\$87.95	54,517,300
<b>Feb 4, 2021</b>	\$100.77	\$117.54	\$63.01	\$63.43	47,469,400
<b>Feb 5, 2021</b>	\$54.02	\$64.83	\$44.25	\$44.80	21,946,300

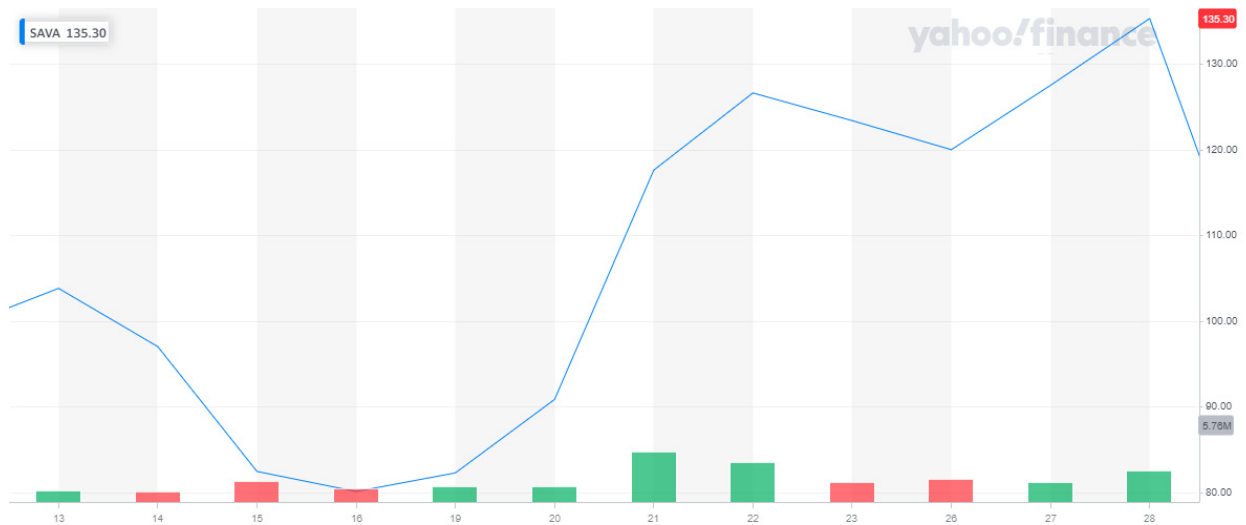
The stock then fluctuated significantly (bouncing between \$32 and \$62 per share) until May 2021.



Nor was the stock price stable between May 13 and July 13, 2021. Instead, Cassava's stock price nearly tripled from about \$37 per share to *more than \$103 per share*.

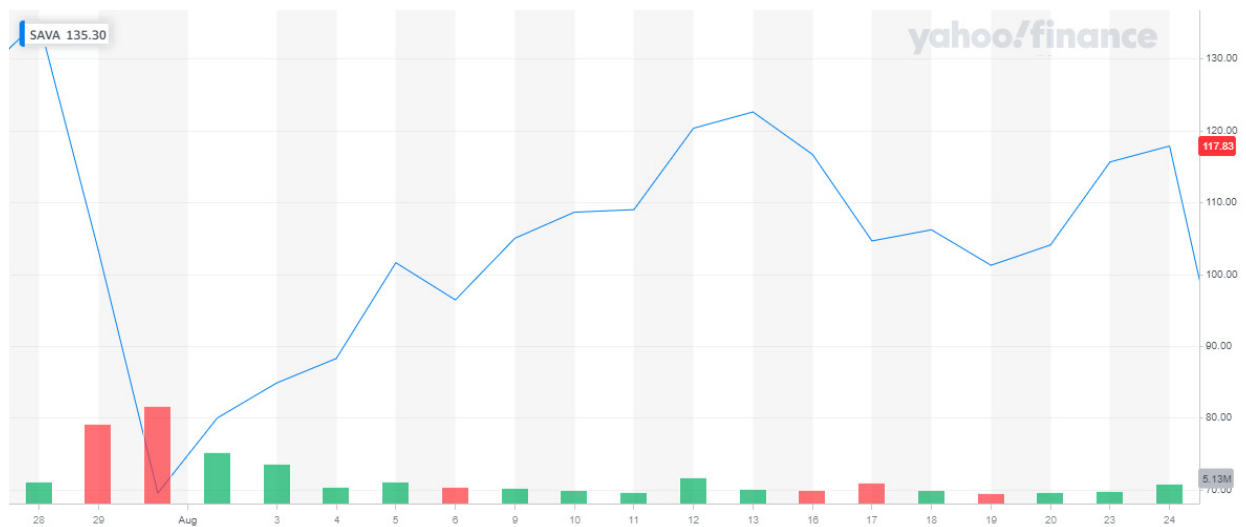


And between July 13 to July 16, 2021, the stock price dropped to about \$80 per share, before rebounding to over \$135 per share by July 28, 2021.



This zigging and zagging occurred during a time when Plaintiff's expert found that no statistically significant movements in the stock could be attributed to value-relevant news about Cassava. See Feinstein Rpt. Exs. 14 & 15.

Contrary to the "better than expected" data released on July 29, 2021, the stock price fell that day, before plummeting further to \$70 per share on Jul 30. The price then rebounded again to over \$118 per share by August 24.



Each of these wild swings in Cassava's stock price was either completely disconnected from disclosure of new information, or, in the case of the July 29 drop, *contrary* to positive news.

Cassava's stock thus demonstrated enormous volatility during a significant portion of the class period, untethered to material information in the market. Combined with market analysts and media's attributing these swings to retail meme-stock traders, this volatility is compelling evidence that the market for the stock should not be presumed "efficient" merely because Cassava was listed on the Nasdaq and actively traded. *See* Stulz Rpt. ¶¶ 16-19; *see also see also Krogman*, 202 F.R.D. at 477 (holding that there was "no efficient market where price movements were random and volatile"); *George v. China Auto. Sys., Inc.*, 2013 WL 3357170, at \*12 (S.D.N.Y. July 3, 2013) (same); *ScriptsAmerica, Inc. v. Ironridge Glob. LLC*, 119 F. Supp. 3d 1213, 1257 (C.D. Cal. 2015) (same); *Serfaty v. Int'l Automated Sys., Inc.*, 180 F.R.D. 418, 423 (D. Utah 1998) (same); *O'Neil v. Appel*, 165 F.R.D. 479, 503 (W.D. Mich. 1996) (same).

Yet Plaintiffs' expert fails to acknowledge—much less consider or explain—any of these swings in his analysis. *See* Feinstein Rpt.<sup>14</sup> Dr. Feinstein conceded that he never even considered how frequently Cassava was discussed on social media until just days before his deposition (months after he completed his report). Ex. 2 (Feinstein Depo. Tr.) at 26:9-22.<sup>15</sup>

In concluding the market was efficient, Dr. Feinstein relied entirely on a rote analysis of the *Cammer/Krogman* factors, without addressing the actual behavior of Cassava's stock during the class period. *See* Stulz Rpt. ¶¶ 45-50; *see Unger*, 401 F.3d at 325 (noting the *Cammer/Krogman*

---

<sup>14</sup> Plaintiffs' expert also fails adequately to account for other swings in Cassava's stock price, including the massive swings in January 2021. Stulz Rpt. ¶¶ 47-54; *see* Feinstein Rpt. ¶¶ 120-86.

<sup>15</sup> Even then, Dr. Feinstein merely asked a research analyst to "google" search, "how frequently Cassava was mentioned on Reddit over the course of the class period." Ex. 2 at 46:1-5. His analyst supposedly reported Cassava was mentioned only a "few hundred times," which is incorrect. *See* Stulz Rpt. Ex. 1. Based solely on that undocumented number, and without any further inquiry, Dr. Feinstein "confirmed that his analysis was complete and appropriate." Ex. 2 at 32:19-20.

factors are an “analytical tool,” not a “checklist”). But the *Cammer/Krogman* factors are of limited value in the meme stock context. Even Dr. Eugene Fama, upon whose research *Basic* itself relied, has acknowledged that meme stocks, where traders act on perceptions rather than new information, are examples of inefficient markets.<sup>16</sup>

Dr. Fama’s insight reveals why the *Cammer/Krogman* factors are not conclusive when it comes to meme stocks. GameStop, AMC, and other meme stocks check the *Cammer/Krogman* boxes. They often have substantial market capitalization, trade at high volumes (sometimes extraordinarily high volumes), receive substantial media and analyst coverage (beyond many similarly sized companies), are eligible for an S-3, have generally narrow bid-ask spreads, and have significant float.<sup>17</sup> But as Dr. Fama explains and the trajectory of Cassava’s stock price shows, none of these indirect indicators are dispositive of efficiency when retail traders coordinate in trading a meme stock. Under these circumstances, more is required. *See Stulz Rpt.* ¶¶ 60-94.

In short, because Dr. Feinstein fails to meaningfully engage with the facts, his report fails to establish market efficiency. *See IBEW Loc. 90 Pension Fund v. Deutsche Bank AG*, 2013 WL 5815472, at \*15 (S.D.N.Y. Oct. 29, 2013) (finding no efficiency where plaintiffs’ expert failed to consider all characteristics of the relevant market); *In re Northfield Lab’ys, Inc. Sec. Litig.*, 267 F.R.D. 536, 548 (N.D. Ill. 2010) (finding no efficiency where plaintiffs’ expert “made decisions about [the event] study that tend[ed] to skew it towards a conclusion that the market was

---

<sup>16</sup> Ex. 18, “Nobel Winner Eugene Fama on GameStop, Market Bubbles and Why Indexing is King,” *MarketWatch* (Mar. 3, 2021).

<sup>17</sup> *See also* Ex. 17 at 15-22 (explaining the high-volume trading, rapidly expanding market capitalization, and increased media attention in GameStop stock in 2021, and how the “swings in GME’s share price and volume” were “not unusual” for meme stocks during this period.).

efficient”); *see also Cannon v. BP Prod. N. Am., Inc.*, 2013 WL 5514284, at \*6-17 (S.D. Tex. Sept. 30, 2013) (finding expert report unreliable and denying class certification as a result).<sup>18</sup>

## 2. Plaintiffs’ Expert’s *Cammer* Factor 5 Event Study is Fatally Flawed

Dr. Feinstein’s only attempt to directly measure market efficiency for Cassava’s stock—his “collective event study”—is insufficient because it fails to account for the many significant movements in Cassava’s stock price that occurred in the absence of any new information. Stulz Rpt. ¶¶ 60-94; *see George*, 2013 WL 3357170, at \*12; *Freddie Mac*, 281 F.R.D. at 182.

As explained in Dr. Stulz’s report, many swings in Cassava’s stock price during the class period are better explained by social media activity than by the publication of any value-relevant news. *See* Stulz Rpt. ¶¶ 70-94. Dr. Stulz identified 34 days during the class period that (1) Dr. Feinstein characterizes as “non- or lesser-news days,” but (2) on which Cassava received extremely high levels of social-media attention. *Id.* ¶¶ 71-74. Applying the same significance metric employed by Dr. Feinstein, the rate at which Cassava’s stock price underwent statistically significant changes on these no-news dates is “*indistinguishable*” from the “news” dates Dr. Feinstein identifies. *Id.* ¶ 75 (emphasis added). “This finding suggests that either Cassava’s stock price was often moving in the absence of new, value-relevant information, inconsistent with the ‘cause-and-effect’ relationship Dr. Feinstein attempts to establish, or that the construction of Dr. Feinstein’s ‘collective events study’ is deficient and flawed, or both.” *Id.* ¶ 19.

---

<sup>18</sup> Defendants expect Dr. Feinstein will submit a supplemental or rebuttal report with Plaintiffs’ Reply. Defendants reserve the right to seek to exclude Dr. Feinstein’s testimony under *Daubert* at that time and to seek permission to file a sur-reply, if warranted. *See Georgia Firefighters’ Pension Fund v. Anadarko Petroleum Corp.*, 99 F.4th 770, 775 (5th Cir. 2024) (holding district court was required to conduct full *Daubert* analysis in connection with motion to exclude filed after plaintiffs’ reply in support of class certification).

Indeed, on at least seven of these dates, Cassava’s stock price underwent huge swings in the absence of *any* new value-relevant information:

- February 3, 2021: 45.89% increase
- February 4, 2021: 34.00% decrease
- February 5, 2021: 35.22% decrease
- June 11, 2021: 15.30% increase
- July 21, 2021: 24.51% increase
- November 2, 2021: 21.60% increase
- September 22, 2022: 31.87% increase

Stulz Rpt. ¶¶ 82-94. Such massive swings, “in the absence of news,” undermine any finding of efficiency. *Krogman*, 202 F.R.D. at 477; *see also ScripsAmerica*, 119 F. Supp. 3d at 1257; *Serfaty*, 180 F.R.D. at 423; *O’Neil*, 165 F.R.D. at 503. Given the “numerous days” on which “statistically significant price movement was not associated with a news event,” Plaintiffs cannot show the Cassava market was efficient. *George*, 2013 WL 3357170, at \*12.

### **3. Plaintiffs’ Expert’s Analysis of the *Cammer* and *Krogman* Factors Is Otherwise Fatally Flawed**

Even beyond ignoring blatant signs of inefficiency, Plaintiffs’ *Cammer* and *Krogman* analysis is insufficient and flawed.

*First*, Dr. Feinstein fails to analyze the effect of high borrowing costs on the ability to short Cassava’s stock during the class period. *See* Stulz Rpt. ¶¶ 96-108. Dr. Feinstein points to Cassava’s high level of short interest, asserting it “evinces the presence of likely arbitrage[] activity.” Feinstein Rpt. ¶ 101. But Dr. Feinstein engages in zero analysis of barriers that market participants faced in shorting Cassava’s stock. *See* Stulz Rpt. ¶¶ 96-108. Throughout the class period, the supply of Cassava shares available for short sellers to borrow was limited, greatly increasing costs. *See id.* Exs. 8-9. Indeed, the cost of borrowing to short Cassava stock *exceeded 70%* during part of the class period, well above the 99th percentile of U.S. stocks (which is about 15%). *See id.* Ex. 10. These costs undermined short sellers’ ability to exploit and correct market inefficiencies during



the class period. *See id.* ¶¶ 100-08; *see In re PolyMedica Corp. Sec. Litig.*, 453 F. Supp. 2d 260, 278 (D. Mass. 2006) (finding that “significant barriers to short selling” prevented conclusion that market was efficient). Dr. Feinstein fails to analyze or even acknowledge this fact.

*Second*, Dr. Feinstein also fails to consider the impact of reduced and changing analyst coverage during the class period. *See Stulz Rpt.* ¶¶ 109-13. Dr. Feinstein notes that six analysts covered Cassava during the class period, Feinstein Rpt. ¶¶ 84-86, but ignores that for most of the class period no more than four analysts covered the stock, and that all but two of these analysts *dropped* coverage before the end of the class period, *see Stulz Rpt.* ¶¶ 109-13. Moreover, in dropping coverage, analysts noted an inability to “effectively diligence” information about Cassava. *See id.* ¶ 112. Dr. Feinstein has not conducted *any* analysis to separately establish efficiency during the later portion of the class period, when information about Cassava became more difficult to acquire and assess.

#### **4. Plaintiffs’ Expert Also Fails to Demonstrate that the Markets for Cassava Options Were Efficient During the Class Period**

Plaintiffs also fail to show that the markets for Cassava options were efficient during the class period. *See Stulz Rpt.* ¶¶ 114-58. Plaintiffs tie the supposed efficiency of the markets for Cassava options to the supposed efficiency of the market for Cassava stock. Motion at 12; Feinstein Rpt. ¶ 188. Their arguments thus fail for all the reasons discussed above. But even beyond that basic flaw, Plaintiffs’ analysis of the markets for Cassava options is flawed in myriad other ways.

Dr. Feinstein largely ignores the *Cammer/Krogman* factors when it comes to the markets for Cassava options. *See Stulz Rpt.* ¶¶ 142-49. As to the “trading volume” factor, many Cassava options traded quite infrequently during the class period. On average, Cassava options did not trade on *more than half* of the total available trading days. *See id.* ¶ 149. Dr. Feinstein’s options event study relies on option *quotes* (which are provided daily even in the absence of trades), rather than

on actual transaction *prices*. Feinstein Rpt. ¶¶ 198-99. By relying on option quotes, Dr. Feinstein’s event study masks the markets’ illiquidity and incorrectly implies that a market price has been established even on days when no buying or selling took place. *See* Stulz Rpt. ¶¶ 22, 149.

Bid-ask spreads for Cassava options were also consistently wide. *See* Stulz Rpt. Ex. 15. Indeed, the average bid-ask spread was *over 40%* for both call options and put options during the class period, and many Cassava options had average spreads *exceeding 100%*. *See* Stulz Rpt. Ex. 15. According to academic studies, the average bid-ask spread for options is much lower. Stulz Rpt. ¶ 145 (noting the average is 21%). Dr. Feinstein considers none of these facts.

The one *Cammer* factor Dr. Feinstein *does* attempt to address is *Cammer* factor 5, which considers the cause-and-effect relationship between prices and disclosures. Feinstein Rpt. ¶¶ 193-218. But as with his event study for Cassava’s stock, Dr. Feinstein fails to consider the relationship between social media activity and significant changes in Cassava’s option prices. And instead of testing whether *actual* option prices responded to news, Dr. Feinstein used *average synthetic* prices from his theoretical model based on market quotes rather than actual prices. This approach ignores that many options did not necessarily trade on days with large stock price movements or with news. *See* Stulz Rpt. ¶¶ 139, 141, 149. Dr. Feinstein’s model also ignores that all of Cassava’s options could be exercised before maturity. *See id.* ¶ 140. Moreover, Dr. Feinstein’s options event study fails to account for differences among the different series of Cassava options, instead lumping all Cassava options into a single “market,” ignoring that different options had radically different strike prices (ranging from \$0.50 to \$210.00), expiration dates, and transaction costs, and traded at different frequencies. *See id.* ¶¶ 151-58.

Plaintiffs thus fail to meet their burden to prove that the market for Cassava’s stock or the market for Cassava’s options were efficient. Without an efficient market, classwide reliance goes by the wayside, bringing Plaintiffs’ entire Motion down with it.

**B. Even if the Relevant Market Was Efficient, the *Basic* Presumption Would Be Readily Rebutted Due to a Lack of Price Impact**

“Price impact is...an essential precondition for any Rule 10b–5 class action.” *Halliburton II*, 573 U.S. at 282. Although *Basic* can allow a plaintiff to “establish that precondition indirectly” by demonstrating the relevant market is efficient, defendants may defeat the *Basic* presumption “through evidence that an alleged misrepresentation did not actually affect the market price of the stock.” *Id.* at 282, 284. “In assessing price impact at class certification, courts ‘should be open to *all* probative evidence on that question—qualitative as well as quantitative—aided by a good dose of common sense.’” *Goldman*, 594 U.S. at 122 (citation omitted). “The district court’s task is simply to assess all the evidence of price impact—direct and indirect—and determine whether it is more likely than not that the alleged misrepresentations had a price impact.” *Id.* at 126-27.

Plaintiffs allege that Defendants’ misrepresentations “caused Cassava securities to trade at artificially inflated prices” and that “when Defendants’ prior misrepresentations and omissions were disclosed or otherwise leaked to the market,” Cassava’s stock price “declined significantly, as the prior inflation came out of the price.” ECF 184 (“Compl.”) ¶ 495. Plaintiffs thus are “proceeding under the inflation-maintenance theory” of fraud, where “price impact is the amount of price inflation maintained by an alleged misrepresentation.” *Goldman*, 594 U.S. at 123. To demonstrate price impact under that theory, Plaintiffs must “point to a negative disclosure about a company and an associated drop in its stock price; allege that the disclosure corrected an earlier misrepresentation; and then claim that the price drop is equal to the amount of inflation maintained by the earlier misrepresentation.” *Id.* These are called “corrective disclosures.” *Id.* And such “a disclosure is considered corrective only when it ‘reveals *new facts* that, taken as true, render some aspect of the defendant’s prior statements false or misleading.’” *See In re Apache Corp. Sec. Litig.*, 2024 WL 532315, at \*10 (S.D. Tex. Feb. 9, 2024) (citation omitted) (emphasis added).

Under Plaintiffs’ expert’s discussion of market efficiency, a disclosure of new, value-relevant information should be associated with statistically significant price changes. Feinstein Rpt. ¶ 127. And as Dr. Feinstein explains, on the dates without statistically significant price declines, there is no basis to conclude that the declines were anything other than random variation in the stock price. *See id.* ¶ 127.

Price impact is lacking here. Plaintiffs point to seventeen corrective disclosures, starting with the Citizen Petition’s public release on August 24, 2021, and ending with an article in *Science Magazine* on October 13, 2023. *See Stulz Rpt.* ¶ 161. Eleven of those seventeen corrective disclosures—which relate to the exact research Plaintiffs allege Defendants misrepresented—are not associated with *any* statistically significant decline in the price of Cassava’s stock. Moreover, there is a glaring “mismatch between the contents of the misrepresentation[s]” and four additional “corrective disclosure[s]” alleged by Plaintiffs, which “break[s] down” any speculative inference that the alleged misrepresentations “maintained” any inflation in Cassava’s stock price. *Goldman*, 594 U.S. at 123. In short, the available evidence associated with the vast majority (15 of 17) of Plaintiffs’ hand-picked “corrective disclosures” supports a finding of no price impact.

### **1. The Bulk of Plaintiffs’ Alleged “Corrective Disclosures” Are Not Associated With *Any* Statistically Significant Decline in Stock Price**

Most of the alleged “corrective disclosures” relating to both pre-clinical research and Phase 2a and 2b trials are associated with *no* statistically significant drop in Cassava’s price.

***Pre-Clinical Research.*** Plaintiffs allege that on December 9, 2021, Drs. Bredt and Pitt filed the fourth supplement to the Citizen Petition, which allegedly “revealed ‘irrefutable evidence of data manipulation/fabrication’ in a fundamental experiment found in Cassava’s 2017 *Neurobiology of Aging* paper demonstrating simufilam’s purported method of action for treating Alzheimer’s disease.” Compl. ¶ 31. Specifically, Plaintiffs allege that the supplement identified

“insurmountable problems” with Cassava’s testing methodology that “invalidate[d] the study” and “undercut” whether simufilam binds to Filamin A (how the drug is thought to treat the disease). *Id.* ¶¶ 380-84. Yet no statistically significant decline of Cassava’s stock followed the supplement’s release. Stulz. Rpt. ¶ 165.

Also lacking in price impact are the alleged “corrective disclosures” from when journals that published simufilam’s pre-clinical research either retracted articles or issued statements of concern in response to allegations of manipulation. Specifically, Plaintiffs allege that on December 17, 2021, and January 3, March 22, March 30, and June 1, 2022, the *Journal of Neuroscience*, *Molecular Neurodegeneration*, *Neurobiology of Aging*, *Plos One*, and *Alzheimer’s Research & Therapy* retracted a total of seven papers and issued statements of concern about two more. *See* Compl. ¶¶ 357-60; 408-10; 414-18; 423-24; 433-34. Again, no statistically significant decrease in Cassava’s stock followed any of these disclosures. Stulz Rpt. ¶ 165.

The same failing exists for the allegation that on November 10 and December 21, 2021, Drs. Bredt, Pitt, and Bik stated that the original images that Defendants had provided to journals to refute the allegations of image manipulation “were in fact composites of cropped images, and thus not originals at all.” *See* Compl. ¶¶ 344-49; 386-90. Yet again, no statistically significant decrease in Cassava’s stock followed these alleged corrective disclosures. Stulz Rpt. ¶ 165.

***Phase 2a and 2b Trials.*** On August 30, 2021, Drs. Bredt and Pitt submitted the first supplement to the Citizen Petition. Plaintiffs allege that the supplement “reported that the poster Cassava presented” on July 26, 2021, which was also mentioned briefly in the original Citizen Petition, “contained data discrepancies...including a missing data point” the supplement alleged was significant enough to negate certain biomarker results. Compl. ¶ 328.

The same day, Dr. Elizabeth Bik, a microbiologist with a daily blog, published a blog post that Plaintiffs allege revealed additional issues with the July 26, 2021 poster, stating that a data

point had been “inserted into the placebo group rather than the 100mg group where it belonged,” resulting in a “much less spectacular reduction of” a biomarker’s levels than claimed. *Id.* ¶ 222. Plaintiffs further allege that on September 3, 2021, Mr. Barbier agreed that the data discrepancies identified by Drs. Bredt, Pitt, and Bik were errors. Neither the August 30 nor the September 3 disclosures are associated with any statistically significant price decline in Cassava stock. Stulz Rpt. ¶ 164.

The supplement also targeted the Phase 2a clinical trial results, alleging that an image in a 2020 publication associated with the Phase 2a trial data showed signs of manipulation, casting doubt on “the integrity of these phase 2a data.” Compl. ¶ 242. This disclosure also is not associated with any statistically significant price decline in Cassava stock. Stulz Rpt. ¶ 164.

In light of the market’s nonreaction to these disclosures, each of which goes to the heart of what Plaintiffs allege Defendants misrepresented, there is no basis to conclude that the purported misrepresentations inflated Cassava’s stock price.

## **2. There Is a Glaring Mismatch Between the Misrepresentations and Corrective Disclosures Alleged by Plaintiffs**

There also is a fundamental “mismatch between the contents of the misrepresentation[s] and corrective disclosure[s]” Plaintiffs allege, further “breaking down” any inference that the alleged misrepresentations “maintained” any inflation in Cassava’s stock price. *Goldman*, 594 U.S. at 123; see *In re Apache Corp. Sec. Litig.*, 2024 WL 532315, at \*11 (finding defendants rebutted *Basic* presumption due to “mismatch” between alleged misrepresentations and corrective disclosures). Plaintiffs’ alleged misstatements overwhelmingly concern simufilam’s supposedly manipulated research and trial results. See Compl. ¶¶ 268-413. But, in many instances, the alleged corrective disclosures fail to address those specific alleged misstatements. And this is especially

true of four of the six alleged corrective disclosures that *were* associated with statistically significant drops in Cassava’s stock price.

For instance, Plaintiffs allege that on August 27, 2021, Quanterix Corporation, a biochemical testing company, announced that it “did not interpret the Company’s clinical data or prepare the charts contained in Cassava’s July 26, 2021 AAIC presentation.” Compl. ¶ 323. But that statement by Quanterix did not correct *any* statement that Defendants had made. The only statement Cassava made about Quanterix’s testing was in a press release *two days* before Quanterix’s; that its “plasma p-tau data from Alzheimer’s patients was generated by [Quanterix], an independent company, and presented at the recent [AAIC].” *Id.* ¶ 317. That is unequivocally true.

Similarly, on November 17, 2021, and July 27, 2022, the *Wall Street Journal* and *Reuters* reported that the SEC, National Institutes of Health, and DOJ were investigating Cassava. *See id.* ¶¶ 367-71; 435-37. But the only public statement that Cassava made about government investigations during the proposed class period was on November 15, 2021, just *two days* before the *Wall Street Journal* article, that “[c]ertain government agencies have asked [Cassava] to provide them with corporate information and documents.” *Id.* ¶ 363. That is also true.

Finally, Plaintiffs allege that on October 12, 2023, *Science* published an article that discussed a “50-page report” purportedly issued by CUNY following an investigation into Dr. Wang. *See id.* ¶ 506. According to the Court, the new information in the *Science* article was that “Dr. Wang could not provide any original data for any of the foundational Cassava research alleged to have been manipulated.” ECF 175 at 11. But as Plaintiffs themselves allege, Mr. Barbier told the public on September 3, 2021 that Cassava *did not have* “the original films or images for the Western blots in question” and that “[t]hose were generated by our science collaborator at

CUNY, who is Prof. Wang.” *Id.* ¶ 458. Again, Cassava’s statement was true and was consistent with the alleged “corrective” disclosure.

All this evidence shows “it is more likely than not” that the alleged misrepresentations *did not* have a price impact. *See Goldman*, 594 U.S. at 126-27. Indeed, the vast majority of times when Defendants’ alleged misrepresentations were purportedly corrected, the market did not react in any statistically significant way. Thus, even if Plaintiffs could somehow show an efficient market despite overwhelming contrary evidence, the *Basic* presumption would be rebutted due to lack of price impact. *See Arkansas Tchr. Ret. Sys. v. Goldman Sachs Grp., Inc.*, 77 F.4th 74, 105 (2d Cir. 2023) (rejecting class certification due to “insufficient link between the corrective disclosure and the alleged misrepresentations”); *see also In re Apache Corp. Sec. Litig.*, 2024 WL 532315, at \*11.

**C. Plaintiffs Are Not Entitled to a Presumption of Reliance Under *Affiliated Ute***

Plaintiffs’ attempt to rely on *Affiliated Ute* likewise fails because Plaintiffs’ claims are firmly anchored in Defendants’ alleged affirmative misstatements.

Under *Affiliated Ute*, courts may presume reliance in scheme-liability cases,<sup>19</sup> but only those “in which the plaintiffs have based their complaint primarily upon alleged omissions.” *Abell v. Potomac Ins. Co.*, 858 F.2d 1104, 1119 (5th Cir. 1988), *cert. granted, judgment vacated on other grounds sub nom. Fryar v. Abell*, 492 U.S. 914 (1989); *see also Waggoner v. Barclays PLC*, 875 F.3d 79, 95 (2d Cir. 2017) (explaining that *Ute* presumption applies *only* if the case primarily involves “a failure to disclose,” rather than “affirmative misrepresentations”). The *Ute*

---

<sup>19</sup> The *Ute* presumption cannot apply in Rule 10b-5(b) cases because “a subsection [(b)] claim always rests upon an affirmative statement of some sort, reliance on which is an essential element plaintiff must prove,” and therefore, “the [*Ute*] presumption could be warranted only under [Rule 10b-5] subsections [(a)] and [(c)].” *Smith v. Ayres*, 845 F.2d 1360, 1363 (5th Cir. 1988). To the extent that Plaintiffs seek to assert a claim under Rule 10b-5(b), *see* Compl. ¶ 522, and seek to avail themselves of the *Ute* presumption, the two positions are mutually exclusive and one (or both) must fail.



presumption exists because “when no positive statements [are] made” at all, requiring plaintiffs to prove reliance “on what was not said” is often “impossible or impractical.” *In re Volkswagen “Clean Diesel” Mktg., Sales Pracs., & Prod. Liab. Litig.*, 2 F.4th 1199, 1205 (9th Cir. 2021).

Seeking to invoke the *Ute* presumption, Plaintiffs try to contort this misrepresentation case into an omission case by asserting that Defendants failed to disclose “a scheme ‘to promote the continued development of an experimental.’” Motion at 18. But courts of appeals—including the Fifth Circuit—have unanimously held that plaintiffs cannot “transform affirmative misstatements into implied omissions” simply by contending that a defendant “fail[ed] to disclose which facts in the representation are not true.” *Waggoner*, 875 F.3d at 96; *see Akin v. Q-L Invs., Inc.*, 959 F.2d 521, 530 (5th Cir. 1992) (“It is not enough that a claim has aspects of omission—at a sufficiently high level of generality, they all do.”).<sup>20</sup> Instead, for the *Ute* presumption to apply, the case must be “grounded primarily in allegations that the defendant has failed to disclose *any information whatsoever* relating to material facts about which the defendant has a duty to the plaintiff to disclose.” *Abell*, 858 F.2d at 1119 (emphasis added).

*Ute* simply does not apply when a case involves alleged false or misleading statements about significant material facts. *See id.*<sup>21</sup> That is the case here. Plaintiffs’ entire theory of fraud is based on alleged misleading statements about the support that pre-clinical and clinical research

---

<sup>20</sup> *See also Volkswagen*, 2 F.4th at 1205; *In re Interbank Funding Corp.*, 629 F.3d 213, 219-21 (D.C. Cir. 2010); *Johnston v. HBO Film Mgmt.*, 265 F.3d 178, 193 (3d Cir. 2001); *Joseph v. Wiles*, 223 F.3d 1155, 1162 (10th Cir. 2000); *Cavalier Carpets, Inc. v. Caylor*, 746 F.2d 749, 756-57 (11th Cir. 1984); *Vervaecke v. Chiles, Heider & Co.*, 578 F.2d 713, 717 & n.2 (8th Cir. 1978).

<sup>21</sup> In *Abell*, bond offering statements issued by the defendants failed to disclose material facts about the project and represented that the project was financially feasible. 858 F.2d at 1119. The plaintiff bondholders argued that the *Ute* presumption applied because the defendants concealed that the project was not, in fact, feasible. *Id.* The Fifth Circuit acknowledged that the defendants had omitted material facts, but concluded the plaintiffs failed to establish that the case “primarily” involved omissions. The court explained: “The bondholders have not argued that [the developer] failed to disclose facts about which the investors had no inkling, but that [it] purposely revealed only part of the truth in an effort to mislead potential purchasers.” *Id.*

provided to simufilam’s potential efficacy. *See, e.g.*, Compl. ¶¶ 268-315; *see also* Motion at 3 (“Throughout the Class Period, Defendants carried out their scheme, *repeatedly assuring investors of simufilam’s results...*” (emphasis added)). Plaintiffs cannot now convert a case based on affirmative statements into one based on omissions simply by alleging that the affirmative statements did not include certain information. *See Akin*, 959 F.2d at 530 (holding that claim sounded in misrepresentation when the alleged “wrong lie[d] in...distorting the numbers underlying” the disclosure).<sup>22</sup>

The *Ute* presumption thus cannot solve the reliance problems that plague Plaintiffs’ case.

## **II. Plaintiffs Fail to Provide a Classwide Damages Methodology Consistent with Their Theory of Liability**

Plaintiffs’ proposed class also, independently, cannot be certified because Plaintiffs fail to establish that classwide damages can be calculated consistent with their theory of liability.

“Even where plaintiffs seeking class certification show that common issues predominate on questions of liability, they must also present a damages model ‘establishing that damages are capable of measurement on a classwide basis.’” *Cruson v. Jackson Nat’l Life Ins. Co.*, 954 F.3d 240, 258 (5th Cir. 2020) (quoting *Comcast Corp. v. Behrend*, 569 U.S. 27, 34 (2013)). Any “model purporting to serve as evidence of damages in [a] class action must measure only those damages attributable to [the plaintiffs’] theory” of liability. *Comcast*, 569 U.S. at 35. “If the model does not even attempt to do that, it cannot possibly establish that damages are susceptible of measurement

---

<sup>22</sup> Plaintiffs’ claims are nothing like those in *Affiliated Ute*. There, the defendants, a bank and its assistant managers, were transfer agents for the plaintiffs’ shares in certain assets of the Ute Indian Tribe. 406 U.S. 128, 133-38. The bank’s assistant managers purchased shares for themselves and facilitated the sale of shares on the secondary market, without disclosing that they solicited purchasers for the shares or that the shares were worth more than what the plaintiffs received. *Id.* at 145-48.

across the entire class for purposes of Rule 23(b)(3).” *Id.*; *see also In re BP p.l.c. Sec. Litig.*, 2013 WL 6388408, at \*17 (S.D. Tex. Dec. 6, 2013).

“Following *Comcast*, circuit and district courts have rigorously examined proposed damages methodologies in putative class action cases for disconnects between damages and liability” and have not hesitated to deny class certification on that ground. *In re BP p.l.c. Sec. Litig.*, 2013 WL 6388408, at \*17 (collecting cases). “Plaintiffs cannot avoid this hard look by refusing to provide the specifics of their proposed methodology” at the class certification stage. *Id.* Yet that precisely is what Plaintiffs and Dr. Feinstein try to do here.

Plaintiffs do not demonstrate how they will model damages. Dr. Feinstein skips this analysis, stating only that he will use the “out of pocket” method to calculate damages. Dr. Feinstein described this method at his deposition: “[T]he methodology is to use...the information set that’s available to investors each day of the class period and assess, using all tools available, what would the stock price have been had there been no misrepresentations or omissions.” Ex. 2 at 251:20-252:8; *see also* Feinstein Rpt. ¶ 225; Stulz Rpt. ¶¶ 174-77.

Dr. Feinstein has tried this approach before—hiding behind vague references to unspecified “valuation tools” and “economic analyses,” Feinstein Rpt. ¶¶ 219-32—and had it rejected. One Ohio federal court found that Dr. Feinstein’s “vague, indefinite, and unspecific” opinion failed to comply with *Comcast*, as it “amount[ed] to no damages model at all.” *Ohio Pub. Emps. Ret. Sys. v. Fed. Home Loan Mortg. Corp.*, 2018 WL 3861840, at \*19 (N.D. Ohio Aug. 14, 2018). That court was neither the first nor last to reject Dr. Feinstein’s opinion as a basis for certification. *See In re Vale S.A. Sec. Litig.*, 2022 WL 122593, at \*12 (E.D.N.Y. Jan. 11, 2022), *report and recommendation adopted*, 2022 WL 969724 (E.D.N.Y. Mar. 31, 2022) (rejecting Dr. Feinstein’s opinion as “black box-like, unverifiable, standardless, and subjective”); *Sicav v. James Jun Wang*, 2015 WL 268855, at \*6 (S.D.N.Y. Jan. 21, 2015) (similar).

As these federal courts recognized, Dr. Feinstein’s “methodology” amounts to nothing more than: “trust me, I’m an expert.” That will not do. *In re Vale S.A. Sec. Litig.*, 2022 WL 122593, at \*12. Indeed, the problems with Dr. Feinstein’s failure to present a model for calculating classwide damages are even more pronounced on the unusual facts of this case.

*First*, Dr. Feinstein’s generic discussion of damages fails to explain how, when estimating inflation, he will account for issues that arise from the absence of statistically significant price drops associated with the majority of Plaintiffs’ alleged corrective disclosures. *See Stulz Rpt.* ¶ 167. On the dates without statistically significant price declines, there is no basis to conclude that declines were not caused by random variation in the stock price. *See id.* ¶¶ 24, 159, 167. Thus, if the market for Cassava’s stock were efficient, as Dr. Feinstein claims, Plaintiffs have not shown how it is possible to use disclosures that lack statistically significant price changes to estimate the removal of inflation. *See id.* ¶¶ 160, 167.

*Second*, Dr. Feinstein does not explain how he can account for changes over the proposed class period in what Cassava could have disclosed. To calculate damages as inflation at purchase less inflation at sale (the “out-of-pocket” method Dr. Feinstein describes), Dr. Feinstein would need to measure inflation on *each day* of the proposed class period. But Cassava’s meme-stock status clashes with Dr. Feinstein’s plan to work “chronologically backwards” using the price declines on the alleged corrective disclosure days. *Feinstein Rpt.* ¶ 230. In fact, it leads to absurd results. Cassava’s stock price increased precipitously in 2021, and then experienced similarly precipitous price declines in late summer 2021 that Plaintiffs attribute to corrective disclosures. If those summer 2021 dates are used to measure damages, as Dr. Feinstein contemplates, his method suggests that Cassava’s stock price must have been *negative* for much of the first year of the class period, but for the alleged misrepresentations. *See Stulz Rpt.* ¶¶ 28, 172, 203.

*Third*, Dr. Feinstein does not explain how he will determine the degree to which price declines on corrective disclosure dates are due to corrective information rather than other forces. *See* Stulz Rpt. ¶¶ 187-200. His model depends on estimating the price decline on the alleged corrective disclosure dates that is attributable *only* to the correction of the alleged fraud. But he does not explain how he will do that here.

For example, Dr. Feinstein does not explain how he will isolate the decline (if any) caused by the allegedly corrective information in the Citizen Petition, which was published when Cassava's stock was in the midst of meme-stock frenzy. When the Citizen Petition was published on August 24, 2021, Cassava's stock price was experiencing extreme, retail-trader fueled volatility. In fact, just three weeks prior, Cassava's share price had fallen more 50% on news that analysts universally considered *positive*. And on August 25, *Business Insider* recognized Cassava as one of the top-mentioned stocks on WallStreetBets. Ex. 12.

Following the Citizen Petition, neither JonesTrading, H.C. Wainwright, or Maxim Group, three highly reputable market analysts, changed their price targets for Cassava.<sup>23</sup> At the same time, the FDA foreshadowed its later denial of the Citizen Petition when on August 24, nearly a week after the FDA received the Citizen Petition, it granted Cassava's Phase 3 trials a Special Protocol Assessment (SPA), a binding agreement that the design and analysis of the trials are adequate. *See* Ex. 23 (August 24, 2021 Press Release). Logic and evidence thus dictate that some, if not all,

---

<sup>23</sup> *See* Exs. 19-20 (JonesTrading); Ex. 21 (H.C. Wainwright); Ex. 22 (Maxim). JonesTrading, for instance, emphasized that "[c]linical data is king" and specifically explained that JonesTrading's "focus squarely remain[ed] on" the Phase 2 open label trial, which "is conducted in 16 centers" and "all statistical analysis is conducted by an outside firm that is unaffiliated with Cassava." Ex. 19. The analyst also disclaimed any importance of the Phase 2a or 2b clinical trials in the valuation of Cassava, saying: "We have not given any merit to the biomarker data presented so far." Ex. 20.

of the price drop following the Citizen Petition was due to the same meme-stock phenomenon that drove the stock's volatility for the prior eight months. But Dr. Feinstein's report ignores this.<sup>24</sup>

*Fourth*, Dr. Feinstein does not explain how he can estimate damages associated with each category of alleged misrepresentations. As discussed above, Plaintiffs allege that Defendants misrepresented a variety of pre-clinical and clinical research, and that Defendants made further misrepresentations following the Citizen Petition to "stem the losses." *E.g.*, Motion at 5. Plaintiffs' damages methodology must identify the amount of inflation that is attributable only to Defendants' *actionable* misrepresentations, which may be only a subset of those *alleged*. *See Comcast*, 569 U.S. at 34-36; *see also In re BP p.l.c. Sec. Litig.*, 2013 WL 6388408, at \*17 & n.16 ("Comcast suggests that a damages model which cannot accommodate variations in the liability findings may be grounds for decertification at a subsequent stage of the case.")

For example, Plaintiffs allege Dr. Wang's conflicts of interest as one category of alleged misrepresentations. Plaintiffs do *not* allege, however, that there is any day when the only corrective disclosure related to those conflicts. *See* Compl. ¶¶ 12-13, 28, 58, 370. Instead, on the two dates when information related to Dr. Wang's conflicts was allegedly disclosed, information related to *other* categories of allegations was also disclosed. *See* Stulz Rpt. ¶¶ 181, 184. Dr. Feinstein fails to explain how he could isolate the removal of inflation for only Dr. Wang's conflicts.

Segregating damages by misrepresentation in this case will face insurmountable challenges. Many of the alleged corrective disclosures include information about different aspects

---

<sup>24</sup> Moreover, Dr. Feinstein fails to explain how his damages methodology could reliably measure the impact of the corrections from the impact of uncertainty associated with government investigations. *See* Stulz Rpt. ¶¶ 193-95. Analysts discussed how government investigations impacted Cassava's research on simufilam because they "materially impacted the ability of the ongoing phase 3 program in Alzheimer's disease to enroll patients." *E.g.*, Exs. 22, 24. But a company's stock price could decline following the announcement of an investigation, even if market participants believed there was no merit to the government's claims. Dr. Feinstein makes no effort to distinguish the impact of these forces.

of simufilam’s mechanism of action. The same disclosures allegedly correct information about multiple aspects of both the Phase 2a and 2b clinical trials, including different tests and different metrics within the same tests. *See, e.g.*, Compl. ¶¶ 316-36, 380-85, 423-34. Dr. Feinstein fails to explain what “valuation tools” could estimate the impact of corrective disclosures related to these highly granular distinctions in the alleged misrepresentations.

This challenge will be further complicated by the way the market valued Cassava’s stock. Even when Cassava’s stock reacted to news, the price was based on speculative assessments about simufilam’s chances of approval. As Dr. Feinstein explains, “[w]hat mattered most to analysts and investors about Cassava during the Class Period was the likelihood that simufilam was progressing towards regulatory approval and eventual commercialization.” Feinstein Rpt. ¶ 135. That probability was exceedingly difficult to assess. Simufilam was, during the class period, in the early stages of development. There is no universal rubric to which investors could point to evaluate simufilam’s chances of approval. Instead, the market consisted of a soup of varying opinions about what did and did not matter, which constantly shifted, day-to-day and investor-to-investor. Simply put, determining what early clinical data says about a drug’s approval chances is an exceptionally nuanced exercise, and Dr. Feinstein does not acknowledge these nuances, let alone articulate how to account for them.<sup>25</sup>

Though Dr. Feinstein testified that his methodology reflects “an understanding of the Plaintiffs’ theory of liability,” Ex. 2 at 237:7-14; 238:16-20, his description of his damage

---

<sup>25</sup> By way of just one of *many* examples, biomarker data was, at the time of the Phase 2a and 2b trials, cutting-edge and controversial. The FDA did not consider biomarker data as a viable endpoint for efficacy in drug candidates for Alzheimer’s, which was reflected in FDA guidance during the class period. Ex. 25 (Feb. 2018 FDA guidance). The FDA has since changed its tune, recognizing in new guidance that biomarker data has become a more reliable source. Ex. 26 (Mar. 2024 FDA guidance). There is little doubt that sophisticated biomedical investors would understand these nuances and disagree over their import.

methodology provides only a generic description of his approach. He fails to explain how he would tailor generic approaches to the specific features of this case. In fact, Dr. Feinstein conceded that the only line in the *entire* discussion of his proposed damages methodology that was “specific to Cassava and the alleged misrepresentations and corrective disclosures here” was the conclusory statement that his methodology was “consistent in this case with these Plaintiffs’ theory of liability.” Ex. 2 at 237:7-14; 238:16-20. That is plainly insufficient.

In short, as Dr. Stultz concludes, Dr. Feinstein’s “vague and generic references to the standard tools of financial economics and calculating inflation by ‘working chronologically backwards from the final corrective disclosure’ do not represent a methodology that a financial economist could implement to reliably measure damages in a manner consistent with Plaintiffs’ theory of liability.” Stulz Rpt. ¶ 178. Plaintiffs therefore have failed to prove that classwide damages can be calculated consistent with their theory of liability, and for that reason alone their Motion should be denied. *See Comcast*, 569 U.S. at 35; *In re BP p.l.c. Sec. Litig.*, 2013 WL 6388408, at \*17; *Turnbow v. Life Partners, Inc.*, 2013 WL 3479884, at \*15-18 (N.D. Tex. July 9, 2013).

### **III. Plaintiffs Fail to Establish Rule 23(a)’s Typicality Requirement**

Plaintiffs also fail to prove that their claims are “typical of those of the class.” Fed. R. Civ. P. 23(a). Typicality “focuses on the similarity between the named plaintiffs’ legal and remedial theories and the theories of those whom they purport to represent.” *Griffin v. GK Intelligent Sys., Inc.*, 196 F.R.D. 298, 301 (S.D. Tex. 2000) (internal quotation marks omitted); *see also In re HealthSouth Corp. Sec. Litig.*, 213 F.R.D. 447, 458 (N.D. Ala. 2003). In a securities class action, if class representatives and the class are not subject to the same presumptions of reliance, typicality is not established. *E.g.*, *Griffin*, 196 F.R.D. at 301 (finding class representative who purchased shares “over-the-counter” not typical of purchasers buying on a major exchange); *In re*



*HealthSouth*, 213 F.R.D. at 459 (finding no typicality where representatives had “unique claims of reliance apart from the fraud-on-the-market theory and would be subject to unique defenses”). Evidence of irrational trading behavior by a representative, for example, defeats typicality. *Rocco v. Nam Tai Elecs., Inc.*, 245 F.R.D. 131, 136 (S.D.N.Y. 2007) (finding no typicality where representative’s “purchases indicate[d], if anything, that he was relying not on the market, but on his own assessment of the value of the stock”).

Plaintiffs purport to represent a class of investors who relied on Defendants’ alleged misrepresentations. But Plaintiffs are atypical of that purported class, as they did *not* purchase Cassava stocks or options in reliance on Defendants’ representations. Plaintiffs instead placed reckless, short-term bets hoping to profit off Cassava’s volatility. These high-risk trades—which frequently involved holding positions for less than a day—were disconnected from any representations by Defendants. Such trading behavior confirms that each named Plaintiff was a meme stock trader out to make a quick buck.

**Mohammad Bozorgi.** Mr. Bozorgi’s trading history is instructive. Despite having no trading experience,<sup>26</sup> Mr. Bozorgi moved to the United States, [REDACTED],<sup>27</sup> to try his luck in the stock market.<sup>28</sup> With his [REDACTED], Mr. Bozorgi opened a margin account at HSBC, and in 2021, began taking large positions in meme stocks. For example, on January 27, 2021, Mr. Bozorgi [REDACTED]  
[REDACTED]

---

<sup>26</sup> Mr. Bozorgi represented to this Court in his declaration that he has “twenty years of investment experience.” ECF 26-5. But in fact, Mr. Bozorgi had never bought or sold a security before 2020. *E.g.*, Ex. 3 (Bozorgi Depo. Tr.) at 60:24-61:4; 72:6-73:5.

<sup>27</sup> *Id.* at 86:3-88:22.

<sup>28</sup> *Id.* at 83:23-84:3.

[REDACTED].<sup>29</sup> Similarly, on Friday, January 29, 2021, Mr. Bozorgi bought [REDACTED]  
 [REDACTED]  
 [REDACTED].<sup>30</sup> Nor were these aberrations: [REDACTED]  
 [REDACTED], Mr. Bozorgi [REDACTED] in just the first *9 months* of 2021.<sup>31</sup>

Mr. Bozorgi's investments in Cassava followed this same pattern. Between late June and August of 2021, Mr. Bozorgi frequently and repeatedly turned over large positions in Cassava stock, buying and selling nearly \$15 million—[REDACTED]  
 [REDACTED] And on multiple occasions in July 2021, Mr. Bozorgi bought and sold up to 25,000 shares in Cassava stock (in excess of \$1 million) within days—or on the same day. Similarly, in August 2021, Mr. Bozorgi repeatedly bought and then sold more than \$500,000 in Cassava stock on the same day, for multiple days.<sup>32</sup> During his deposition, Mr. Bozorgi could offer no rational explanation for these trades and did not tie a single trade to news about Cassava.<sup>33</sup>

Further, it was not even Mr. Bozorgi's decision to liquidate his position in Cassava. In August 2021, Mr. Bozorgi incurred substantial losses in his trading account, resulting in a margin call by HSBC. Mr. Bozorgi was out of the country at the time,<sup>34</sup> and either could not or did not provide the bank with instructions on how to cover his losses. Accordingly, HSBC, without Mr. Bozorgi's consent, sold 11,400 shares of Cassava stock to cover his losses.<sup>35</sup> Mr. Bozorgi objected

---

<sup>29</sup> *Id.* at 142:17-143:19.

<sup>30</sup> *Id.* at 162:10-162:20.

<sup>31</sup> *Id.* at 191:3-192:2.

<sup>32</sup> Ex. 3 at 254:5-8; *see also* ECF 26-4 (summarizing Bozorgi's purchases and losses).

<sup>33</sup> Ex. 3 at 207:13-18.

<sup>34</sup> *Id.* at 240:25-241:17.

<sup>35</sup> *Id.* at 269:18-270:8.

to this sale by HSBC,<sup>36</sup> and ultimately asked HSBC if he could buy back his Cassava shares.<sup>37</sup> He blamed the loss of his life savings on HSBC's margin department liquidating Cassava stock without his permission, and insisted on remuneration from HSBC.<sup>38</sup>

HSBC thereafter notified Mr. Bozorgi that "because of the high volatility and high margin calls" in his account and because he declined their prior requests to discuss his risky trading strategy,<sup>39</sup> Mr. Bozorgi was cut off from any further trading at HSBC.<sup>40</sup>

**Kenneth Calderone.** Mr. Calderone was similarly an active trader in 2021, [REDACTED]

[REDACTED] Mr. Calderone employed a trading strategy of purchasing stocks with an intent to sell them within a month or less to take profits,<sup>41</sup>

[REDACTED].<sup>42</sup>

In June 2021, Mr. Calderone overheard a podcast that his wife (a day trader) was listening to, which was discussing Cassava stock.<sup>43</sup> Despite his wife's warning of "high risk" and that he needed to "be careful,"<sup>44</sup> Mr. Calderone bought 1,000 shares of Cassava stock for roughly \$83,000 ([REDACTED]) *without any further diligence*.<sup>45</sup> Mr. Calderone then continually bought and sold substantial positions, ultimately purchasing more than \$315,000 and selling more than \$420,000 in July 2021, [REDACTED]

[REDACTED].<sup>46</sup> Indeed, on more than one occasion that July, Mr. Calderone

---

<sup>36</sup> *Id.* at 265:10-266:10.

<sup>37</sup> *Id.* at 272:15-273:14, 280:17-281:12.

<sup>38</sup> *Id.* at 287:15-288:14; Ex. 27 (Bozorgi Depo. Ex. 13) at 1.

<sup>39</sup> Ex. 3 at 293:8-294:7; Ex. 28 (Bozorgi Depo. Ex. 14) at 1-2.

<sup>40</sup> Ex. 3 at 294:12-294:22.

<sup>41</sup> Ex. 4 (Calderone Depo. Tr.) at 88:7-18, 111:7-20.

<sup>42</sup> *E.g., id.* at 92:12-23.

<sup>43</sup> *Id.* at 175:16-177:15.

<sup>44</sup> *Id.* at 178:9-179:4.

<sup>45</sup> *Id.* at 182:1-182:9.

<sup>46</sup> *Id.* at 219:19-221:5; ECF 129-5 (Calderone Declaration).



bought and sold more than \$100,000 in Cassava stock—

—in a single day.<sup>47</sup>

Mr. Calderone testified that he would have continued to trade in this fashion—and would have sold his entire position of 1,000 shares in Cassava within days—except that on July 29-30, 2021, Cassava’s stock fell by roughly 50%.<sup>48</sup> Mr. Calderone testified that this loss was the sole cause of his damages.<sup>49</sup> Plaintiffs’ Complaint, however, alleges no corrective disclosure on these dates. Regardless, and consistent with the enormous volatility in Cassava stock in the summer of 2021, Cassava’s stock almost fully recovered that 50% drop within two weeks, at which point Mr. Calderone admitted that he could have exited his position with effectively no loss.<sup>50</sup> But Mr. Calderone held his 1,000 Cassava shares because he was betting the stock would continue to increase.<sup>51</sup>

Indeed, Mr. Calderone believes to this day that Cassava’s stock is undervalued and will go higher.<sup>52</sup> He has continued to purchase shares in Cassava, including just weeks after the Complaint was filed.<sup>53</sup>

**Mohammed Rao.** Mr. Rao employed a similarly risky strategy.

---

<sup>47</sup> Ex. 4 at 195:23-196:22, 202:5-11.

<sup>48</sup> *Id.* at 209:7-12, 211:11-212:24.

<sup>49</sup> *Id.* Specifically, Mr. Calderone testified that his practice was to set an 8% stop loss on his Cassava trades, which would have caused his stock to automatically sell at approximately \$116 per share on July 29, 2021, but that the stop-loss was not effective because the stock price sank after trading hours. *Id.* at 211:21-212:24, 225:3-226:17, 270:21-271:23.

<sup>50</sup> *Id.* at 214:1-22, 224:3-225:19.

<sup>51</sup> *Id.*

<sup>52</sup> *Id.* at 217:1-218:8.

<sup>53</sup> Mr. Calderone bought 200 shares in September 2022, a month after filing the Complaint in this case; he bought another 100 shares in May 2023; he bought 125 shares in late October 2023, after the end of the class period; and he bought 5 shares in December 2023. *Id.* at 274:12-275:8, 277:5-279:1, 279:25-280:5; ECF No. 129-5 (Calderone Declaration) at 5.

[REDACTED]

[REDACTED]

[REDACTED].<sup>54</sup>

In July and August 2021, Mr. Rao aggressively applied this strategy to Cassava options, often selling hundreds of put contracts at a time that would force him to dedicate his entire account to the purchase of Cassava stock if the contracts came due.<sup>55</sup> In one such trade on August 23, Mr. Rao sold 201 put contracts obligating him to buy 20,100 shares of Cassava stock at \$95 per share if the price dropped below that level before August 27, a move Mr. Rao admitted was “extremely risky” given the stock’s performance.<sup>56</sup> Mr. Rao could not recall doing any diligence on Cassava before these trades and mistakenly believed that simufilam was already FDA approved.<sup>57</sup>

Each Plaintiffs’ trading history is indicative of reckless, high-volume trading by retail traders seeking to profit from short-term volatility in a meme stock. Such trading patterns “raise individualized questions regarding why they made their investments...and whether they have negative loss causation,” defeating typicality. *See IBEW Loc. 90 Pension Fund v. Deutsche Bank AG*, 2013 WL 5815472, at \*22 (S.D.N.Y. Oct. 29, 2013) (rejecting class certification on that ground); *see also Ellis v. Costco Wholesale Corp.*, 657 F.3d 970, 985 (9th Cir. 2011); *Gary Plastic Packaging Corp. v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*, 903 F.2d 176, 180 (2d Cir. 1990).

---

<sup>54</sup> Ex. 5 (Rao Depo. Tr.) at 77:16-78:6, 250:7.

<sup>55</sup> *E.g., id.* at 355:18-23.

<sup>56</sup> *Id.* at 355:24-356:1. Mr. Rao took this gamble even though Cassava’s share price had *plummeted* just weeks earlier following *good news*, closing at \$69 on July 30, 2021 (the day Mr. Calderone claims he suffered his losses) after hitting an intraday high of \$146 the day before. *Id.* at 300:6-9. As a result, on August 27, Mr. Rao was forced to purchase \$1.9 million of Cassava stock at \$95 per share after the stock fell following the public release of the Citizen Petition. *Id.* at 326:18-21. Rao then sold all that stock on the same day at a significant loss. *Id.* at 328:22-329:11.

<sup>57</sup> *Id.* at 212:18-23.

Further, each of Plaintiffs' damages claims raises unique issues. Mr. Calderone contends that his damages stemmed from the July 30, 2021 stock drop, which was not associated with *any* alleged misrepresentation in this case. Mr. Bozorgi blames his losses on his broker liquidating his Cassava stock at an inopportune time. And Mr. Rao's losses are attributable only to his incredibly risky options bet. Accordingly, their damages theories are atypical of the class. *See Shannon v. Allstate Ins. Co.*, 2024 WL 1080915, at \*8 (W.D. Tex. Jan. 31, 2024) (rejecting class certification because plaintiffs failed to show their damages were "typical of other class members.")

### **CONCLUSION**

For these reasons, the Court should deny Plaintiffs' Opposed Motion for Class Certification.

Dated: June 28, 2024

Respectfully submitted,

/s/ Gregg Costa

Gregg Costa (Tx. Bar No. 24028160)  
Trey Cox (Tx. Bar No. 24003722)  
GIBSON, DUNN & CRUTCHER LLP  
811 Main Street Suite 3000  
Houston, TX 77002  
Telephone: 346.718.6600  
Facsimile: 346.718.6979  
gcosta@gibsondunn.com  
tcox@gibsondunn.com

Monica K. Loseman (admitted *pro hac vice*)  
Scott Campbell (admitted *pro hac vice*)  
John Turquet Bravard (admitted *pro hac vice*)  
GIBSON, DUNN & CRUTCHER LLP  
1801 California Street  
Denver, CO 80202-2642  
Telephone: 303.298.5700  
Facsimile: 303.298.5907  
mloseman@gibsondunn.com  
scampbell@gibsondunn.com  
jturquetbravard@gibsondunn.com

Mary Beth Maloney (admitted *pro hac vice*)  
GIBSON, DUNN & CRUTCHER LLP  
200 Park Avenue  
New York, NY 10166  
Telephone: 212.351.4000  
Facsimile: 212.351.6315  
mmaloney@gibsondunn.com

*Attorneys for Defendants*

**CERTIFICATE OF SERVICE**

The undersigned certifies that on June 28, 2024, a true and correct copy of the foregoing was served electronically upon each attorney of record via email.

/s/ Gregg Costa

Gregg Costa